Here you go, Ram! Here's your **TCS ITIS IPA Exam Notes** — fully formatted for **copy-paste** into Word, Google Docs, or Notion to save as PDF.



TCS ITIS IPA (Pre-ILP) Study Notes

Target Topics: Windows 10, Windows Server, PowerShell, Linux, Networking, Hardware, ITIL v4

WINDOWS 10

- User Types:
 - o Admin Full control
 - o Standard Limited
 - Guest Temporary
- Important Shortcuts:

```
o Ctrl + Shift + Esc → Task Manager
```

- \circ Win + R \rightarrow Run dialog
- o diskmgmt.msc → Disk Management
- Safe Mode:
 - Used to troubleshoot driver/startup issues
 - Access via Advanced Startup → Restart in Safe Mode
- System Restore:
 - Reverts to a previous system state (won't delete files)

• Key Roles:

- Active Directory (AD) Manages users/groups/domains
- **Group Policy (GPO)** Enforce rules (e.g., disable USB)
- **DHCP** Assigns IPs automatically
- o **DNS** Resolves names to IPs
- o File Server Stores shared folders

Scenario Tips:

- \circ Need one login for all systems \rightarrow Use **AD**
- $\circ \quad \text{Apply password policy} \to \text{Use } \textbf{GPO}$

V LINUX BASICS

- Popular Distros: Ubuntu, CentOS, RedHat
- Commands:
 - 1s List files
 - o cd Change directory
 - o mkdir Make directory
 - o rm Remove file
 - chmod Change permissions
- Permissions (e.g. 755):
 - o 7 = read+write+execute
 - Owner | Group | Others
- Install Package:
 - o Ubuntu: sudo apt-get install apache2

o CentOS: sudo yum install httpd

POWERSHELL (Windows)

- Cmdlets:
 - o Get-Service List services
 - Stop-Service -Name spooler Stop service
 - Start-Service Start service
 - o Get-Process List processes

To run scripts:

Set-ExecutionPolicy RemoteSigned

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NETWORKING FUNDAMENTALS

OSI Model (7 Layers):

- 1. Physical Cables
- 2. Data Link MAC, Switch
- 3. Network IP, Router
- 4. Transport TCP/UDP
- 5. Session Connection mgmt
- 6. Presentation Encryption
- 7. Application Browser, apps

TCP/IP Model:

 $\bullet \quad \mathsf{Application} \to \mathsf{Transport} \to \mathsf{Internet} \to \mathsf{Link}$

Devices:

Devic
eOSI Layer
ePurposeHub1BroadcastsSwitch2MAC AddressingRouter3IP Routing

Protocols & Ports:

Protoco I	Function	Port
DHCP	IP Assign	67/68
DNS	Name resolution	53
HTTP	Web Browsing	80
HTTPS	Secure web	443
TCP	Reliable	_
UDP	Fast, not reliable	_

IP Addressing:

• IPv4: 32-bit (e.g., 192.168.1.1)

• Subnetting divides networks

• Class A: 1-126

• Class B: 128-191

• Class C: 192-223

COMPUTER HARDWARE

Componen Description t

CPU Executes instructions (Brain)

RAM Temporary memory (volatile)

HDD/SSD Permanent storage

BIOS/UEFI Boot firmware

PSU Power Supply Unit

Boot Process:

- 1. Power ON
- 2. BIOS runs POST
- 3. Loads OS from Disk
- 4. OS starts

☑ ITIL v4 FOUNDATION

5 Stages:

- 1. **Service Strategy** Planning value
- 2. **Service Design** Build new services
- 3. **Service Transition** Test and deploy
- 4. Service Operation Day-to-day running
- 5. Continual Service Improvement (CSI)

Key Concepts:

Term	Meaning
Incident	Unexpected issue (printer not working)
Problem	Root cause of repeated incidents
Change	Planned update or upgrade
Service Request	Ask for access/reset/password

TOP 20 MCQs

Q#	Question	Answer
1	User can't install software, why?	Standard user
2	Open Disk Management	diskmgmt.msc
3	Protocol for IP assignment	DHCP
4	Full permission in Linux	chmod 777
5	Routing is handled at which layer?	Network
6	Can ping IP but not website name	DNS issue
7	Manage users in domain	Active Directory
8	Apply company policy to many users	Group Policy
9	Stop print service in PowerShell	Stop-Service
10	Printer stops working suddenly	Incident
11	Install software on Ubuntu	apt-get install
12	Connects different networks	Router
13	Change directory in Linux	cd
14	Root cause investigation	Problem Management
15	Task Manager shortcut	Ctrl + Shift + Esc
16	User asks for password reset	Service Request
17	OSI top layer	Application
18	Boot firmware	BIOS
19	Check IP in Windows	ipconfig
20	Automate tasks	PowerShell

▼ FLASHCARDS (TEXT)

Q: What tool manages users across systems?

A: Active Directory

Q: What is the shortcut to open Task Manager?

A: Ctrl + Shift + Esc

Q: What protocol assigns IP addresses automatically?

A: DHCP

Q: What command lists files in Linux?

A: Is

Q: Full permission on file for everyone in Linux?

A: chmod 777 filename

Q: Which layer does routing?

A: Network Layer (Layer 3)

Q: A router works at which OSI layer?

A: Layer 3

Q: What is the brain of a computer?

A: CPU

Q: Memory lost after shutdown?

A: RAM

Q: DNS role?

A: Resolves domain to IP address

Q: ITIL: User asks for access. What is it?

A: Service Request

Q: How to stop a service using PowerShell?

A: Stop-Service -Name [ServiceName]

Q: IP command in Windows?

A: ipconfig

Q: Root cause of incident is?

A: Problem

Q: Which protocol is fast but not reliable?

A: UDP

M HOW TO SAVE AS PDF

1. Copy everything from here

- 2. Paste into Google Docs or Word
- 3. File > Save As > PDF

№ Need More Help?

Say:

- "Give me subnetting examples"
- "Create Linux cheat sheet"
- "Generate ITIL practice quiz"

You've got this, Ram! Stay consistent, revise flashcards, and you'll do great in the exam Let me know if you want the **Anki version** or a **PowerPoint/PDF template**!